



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

We have fault to find with the lettering and other signs affixed to the paragraphs of the analytical keys of the various divisions. Were it not for the indenting and correct ranging of these paragraphs, their relations to each other could be only discovered by a considerable study of the signs affixed, and then many students, we suspect, would be hopelessly confused. The same system or *unsystem* has been adopted by Mr. Dobson in his catalogue of Chiroptera. It is to be sincerely hoped that in future the taxonomic keys may be arranged on the usual plan, such as for instance is employed by Mr. Boulenger in his catalogues of the Batrachia and Reptilia.

The twenty-eight plates are a welcome aid to the study, but the dental cusps are often poorly represented.

THE CLASSIFICATION OF THE CRINOIDEA appears now to have reached sound and rational basis as is clearly set forth in a recent important contribution<sup>1</sup> to Crinoid morphology by Messrs. Charles Wachmuth and Frank Springer. Although the subject is approached chiefly from a palæontological standpoint, morphological deductions derived from the latest researches among living crinoids have been duly considered. The systematic arrangement of the Crinoidea as indicated is of not less supreme interest to the palæontologist than to the biologist; and the classification as now proposed appears to be practically in agreement with the views of Dr. P. Herbert Carpenter, the distinguished English authority on recent crinoids. The necessity of a radical change in the existing classification centers around the discovery of the ventral structure in *Taxocrinus*. It is now clearly demonstrated that in this genus, and doubtless in the Ichthyocrinidæ generally, the mouth is open, and surrounded by five conspicuous oral plates, as in the recent genera *Rhizocrinus*, *Bathocrinus*, *Hyocrinus* and *Holopus*; thus differing in structure very materially from other palæozoic crinoids, which have the mouth closed. In the latter group, as is now conclusively shown, the orals are the hitherto denominated "central" and four "proximate" plates. The plan upon which modern crinoids are constructed is therefore one of high antiquity, dating back geologically to the Lower Silurian.

The Crinoidea are thus divisible into

1. Camarata.
2. Inadunata, comprising the branches Larviformia and Fistulata.
3. Articulata, including Ichthyocrinidæ and possibly *Uintacrinus* and *Thaumatocrinus*.
4. Canaliculata, including most of the mesozoic and recent crinoids.—C. R. K.

<sup>1</sup> Discovery of the ventral structure of *Taxocrinus* and *Haplocrinus*, and consequent modifications in the classification of the Crinoidea.—By Charles Wachmuth and Frank Springer. Proceedings of the Academy Natural Sciences. Philadelphia, Nov. 27, 1888.